005760'95229960

FIG. 1

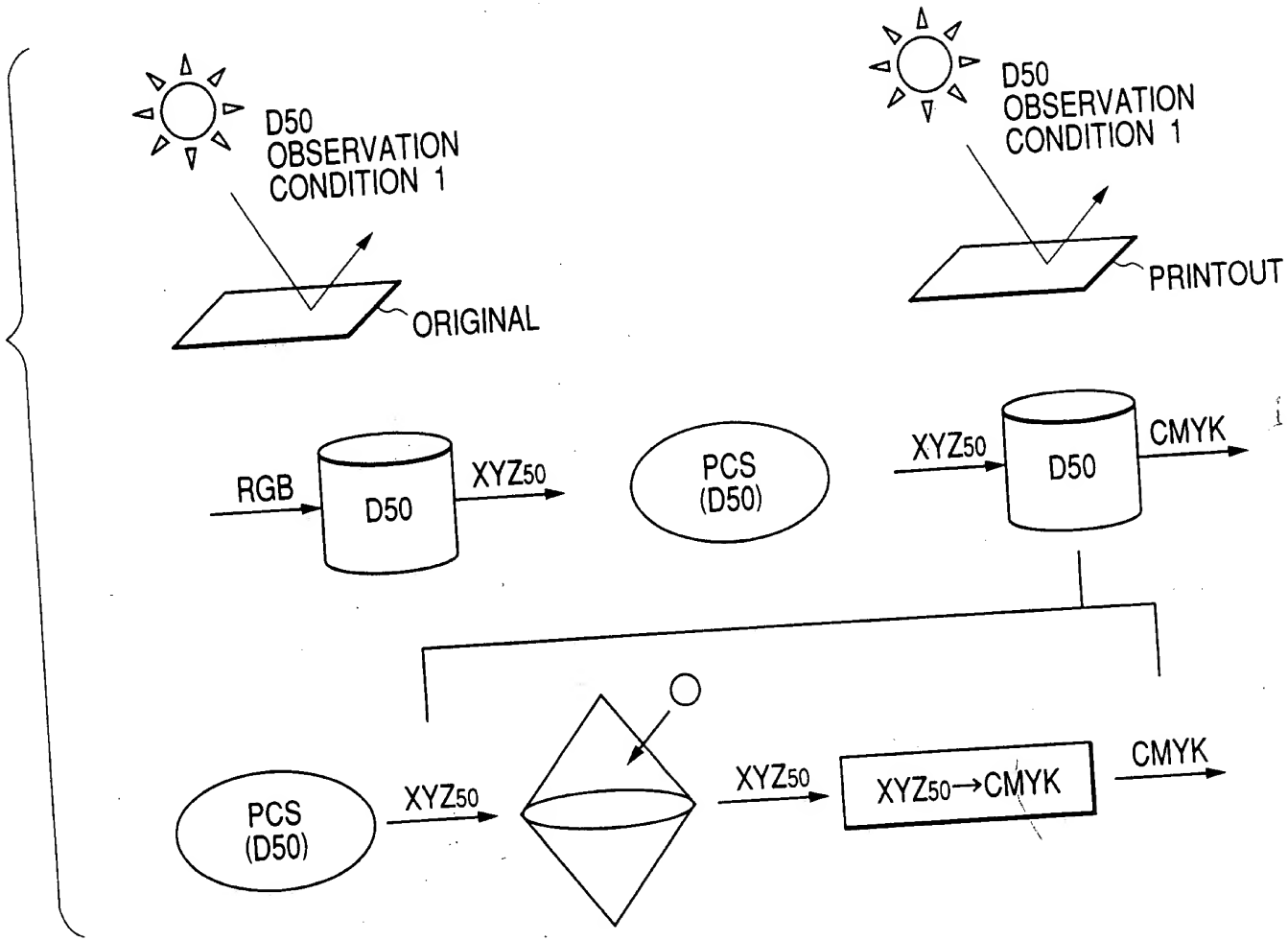
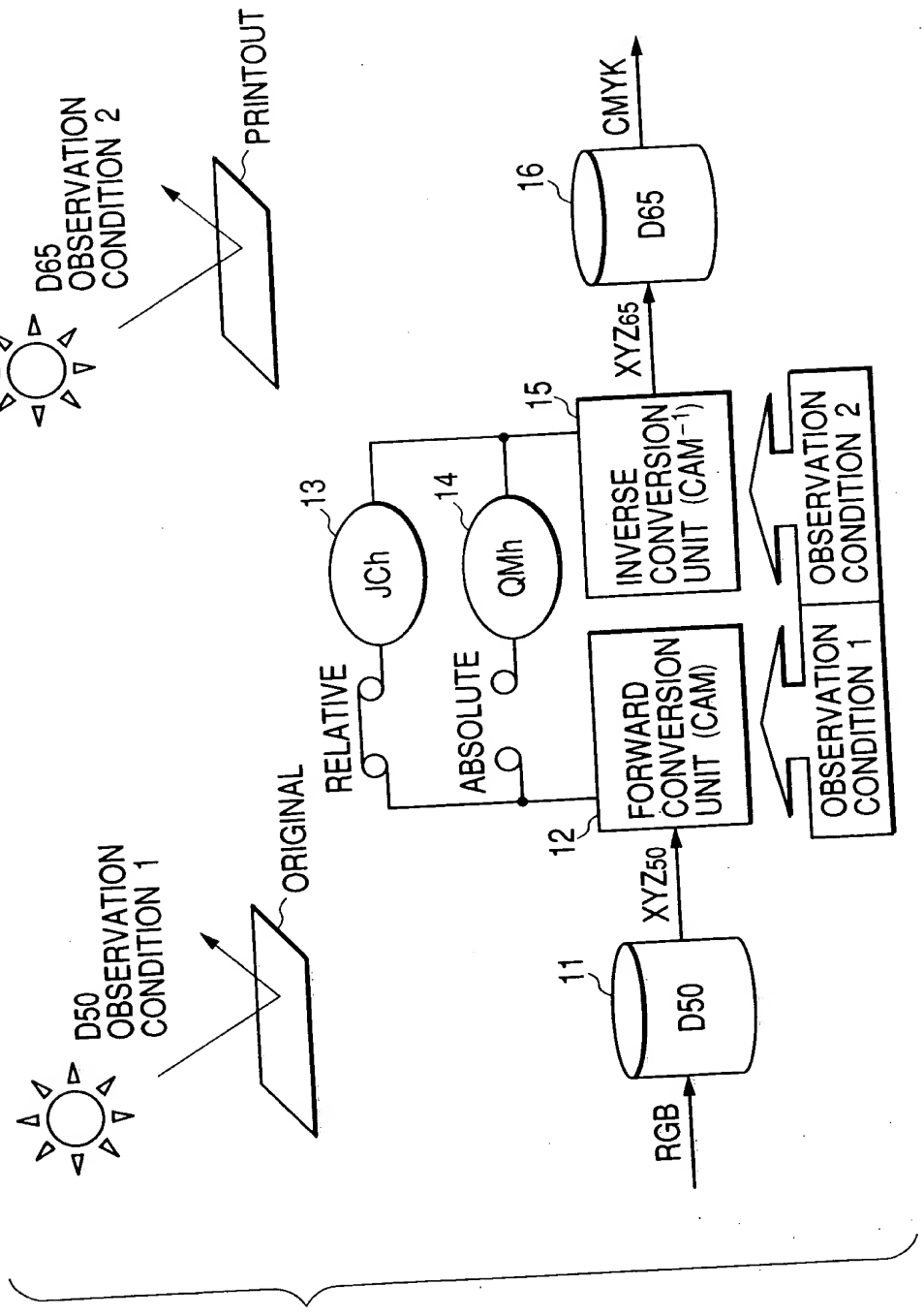


FIG. 2


RGB
D50
11
XYZ50
FORWARD CONVERSION UNIT (CAM)
12
RELATIVE
ABSOLUTE
13
JCh
14
QMh
15
INVERSE CONVERSION UNIT (CAM^{-1})
XYZ65
16
D65
CMYK
OBSERVATION CONDITION 1
OBSERVATION CONDITION 2
D50 OBSERVATION CONDITION 1
ORIGINAL
D65 OBSERVATION CONDITION 2
PRINTOUT

0051501-952959

FIG. 3

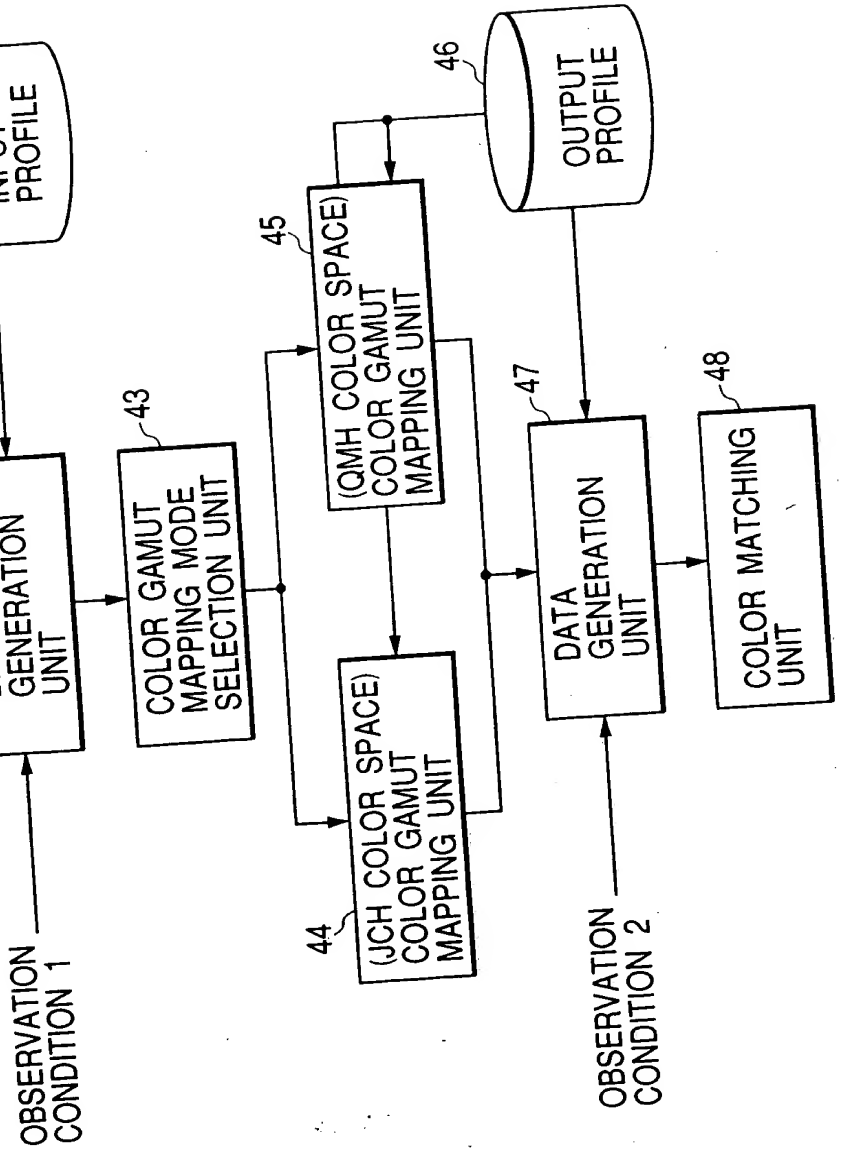
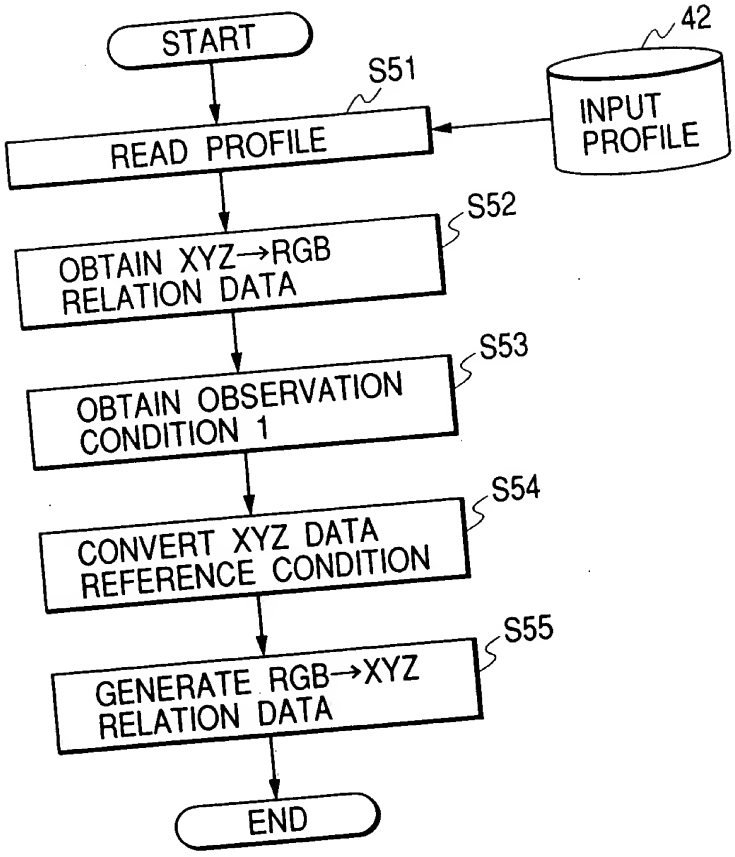


FIG. 4



3656756-081500

FIG. 5

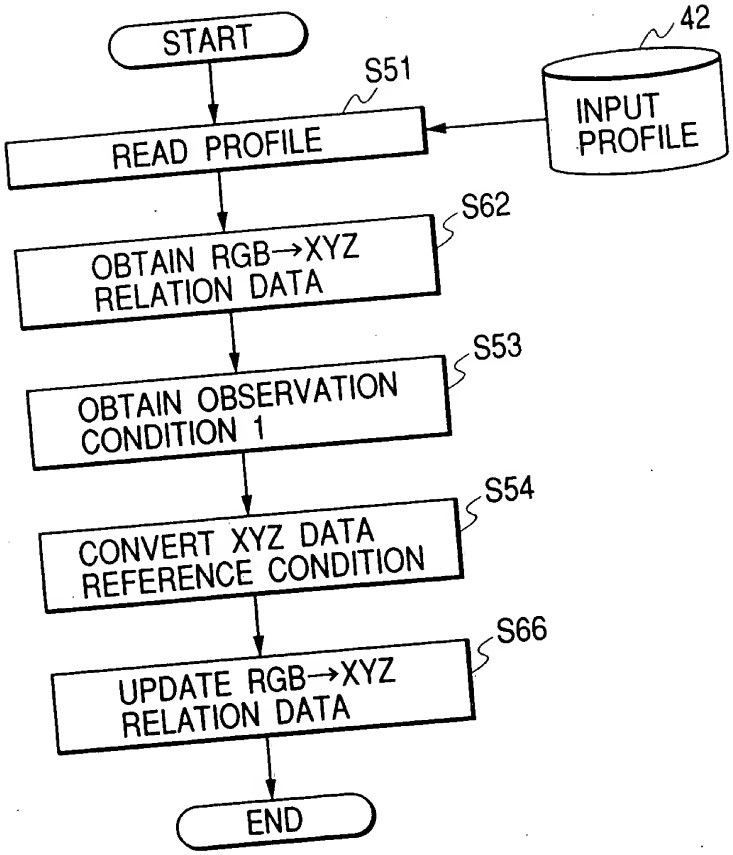
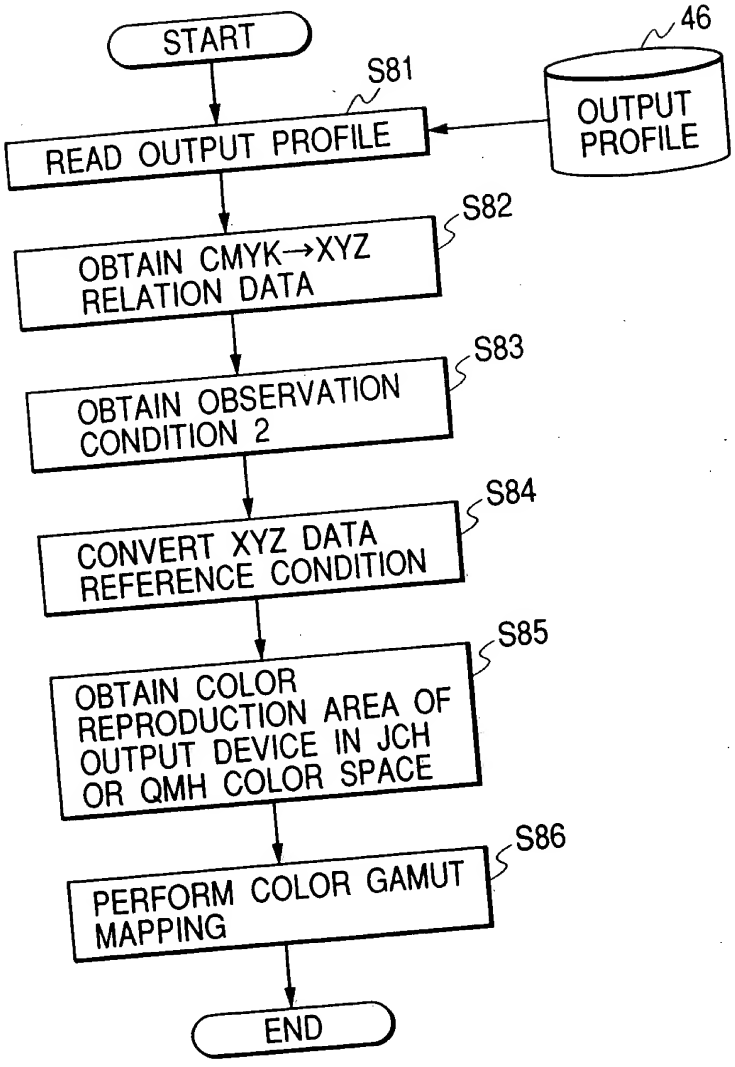

START
S51
READ PROFILE
42
INPUT PROFILE
S62
OBTAIN RGB→XYZ RELATION DATA
S53
OBTAIN OBSERVATION CONDITION 1
S54
CONVERT XYZ DATA REFERENCE CONDITION
S66
UPDATE RGB→XYZ RELATION DATA
END

FIG. 6



0056705 - 0056706

FIG. 7

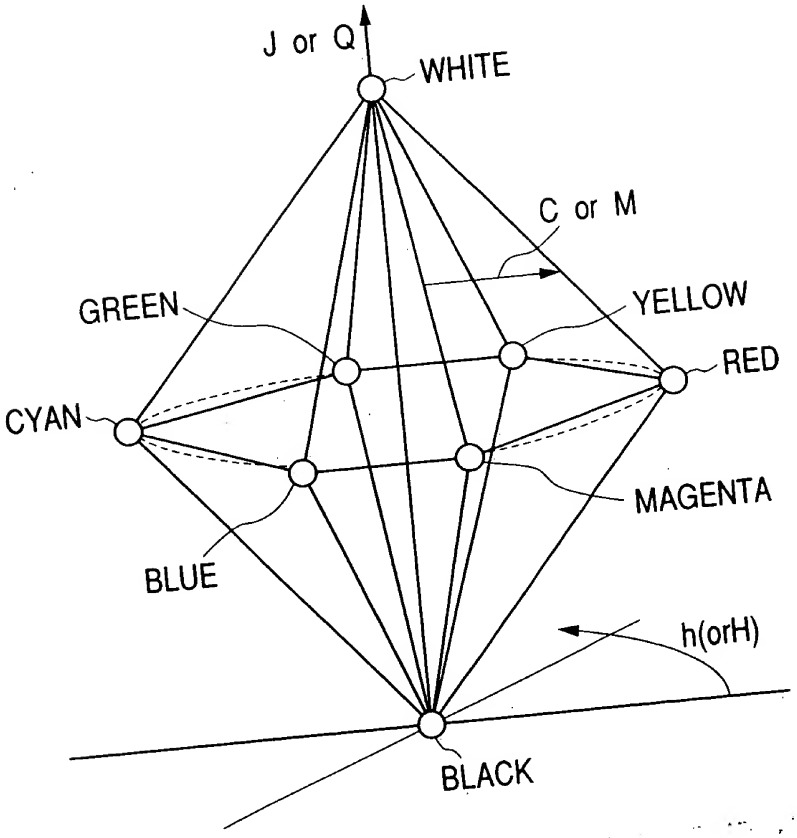

J or Q
WHITE
C or M
GREEN
YELLOW
RED
CYAN
MAGENTA
BLUE
h(orH)
BLACK

FIG. 8A

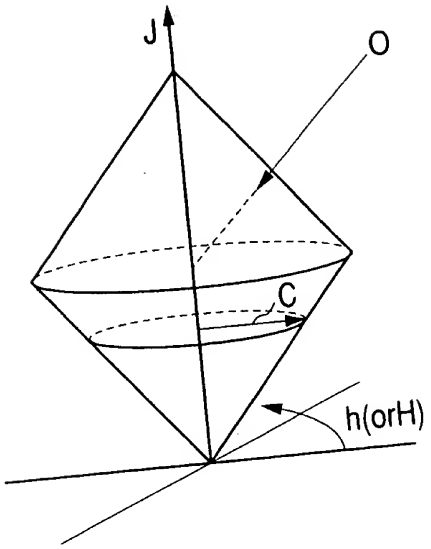


FIG. 8B

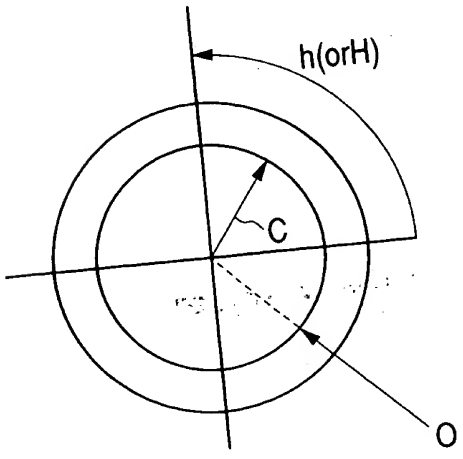


FIG. 9A

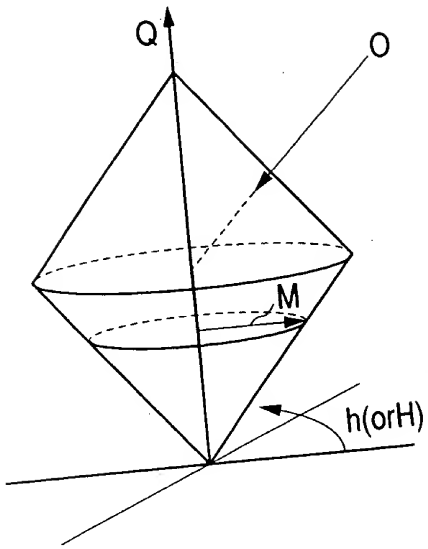
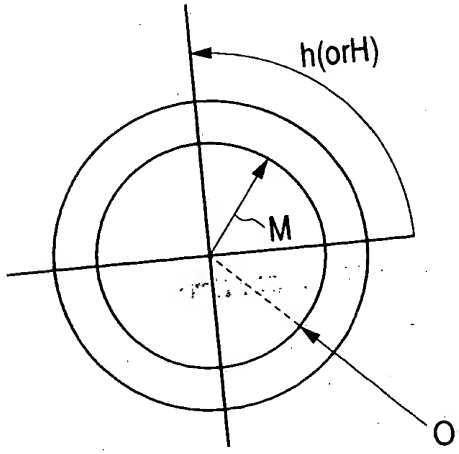


FIG. 9B



0956756 - 0956756

FIG. 10A

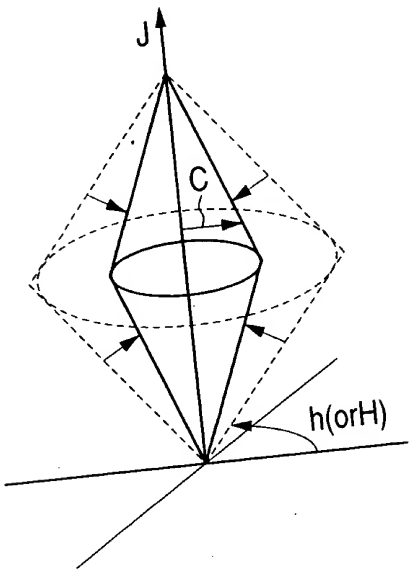


FIG. 10B

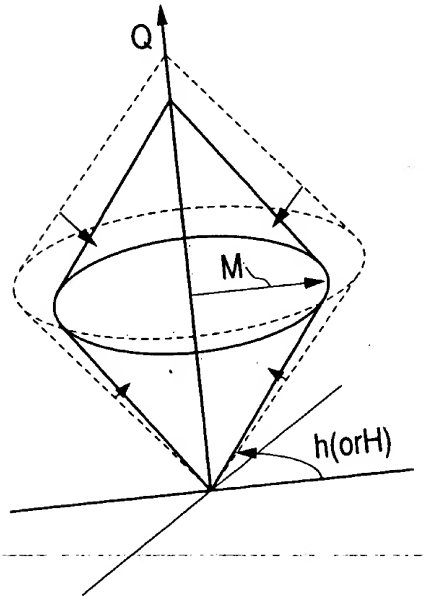
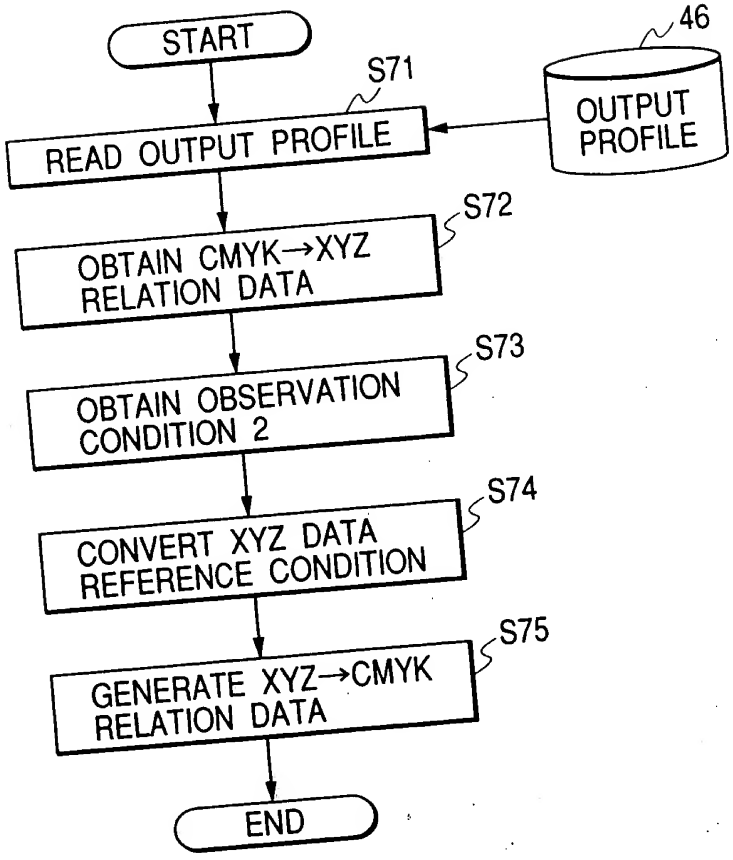


FIG. 11



0562459.0150

FIG. 12

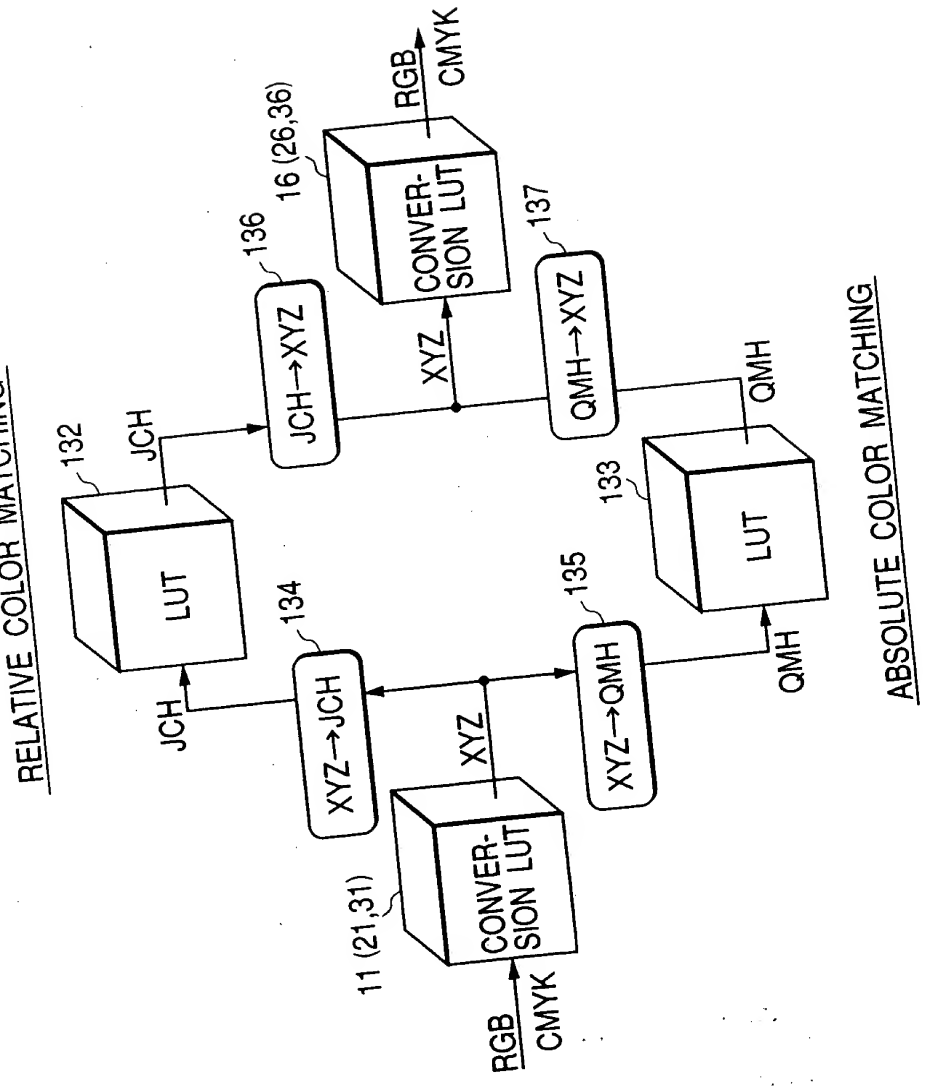

RELATIVE COLOR MATCHING
ABSOLUTE COLOR MATCHING
RGB
CMYK
11 (21,31)
CONVER-SION LUT
XYZ→JCH
JCH
XYZ
XYZ→QMH
QMH
LUT
133
132
JCH
LUT
134
135
JCH→XYZ
136
XYZ
QMH→XYZ
137
16 (26,36)
CONVER-SION LUT
RGB
CMYK

FIG. 13

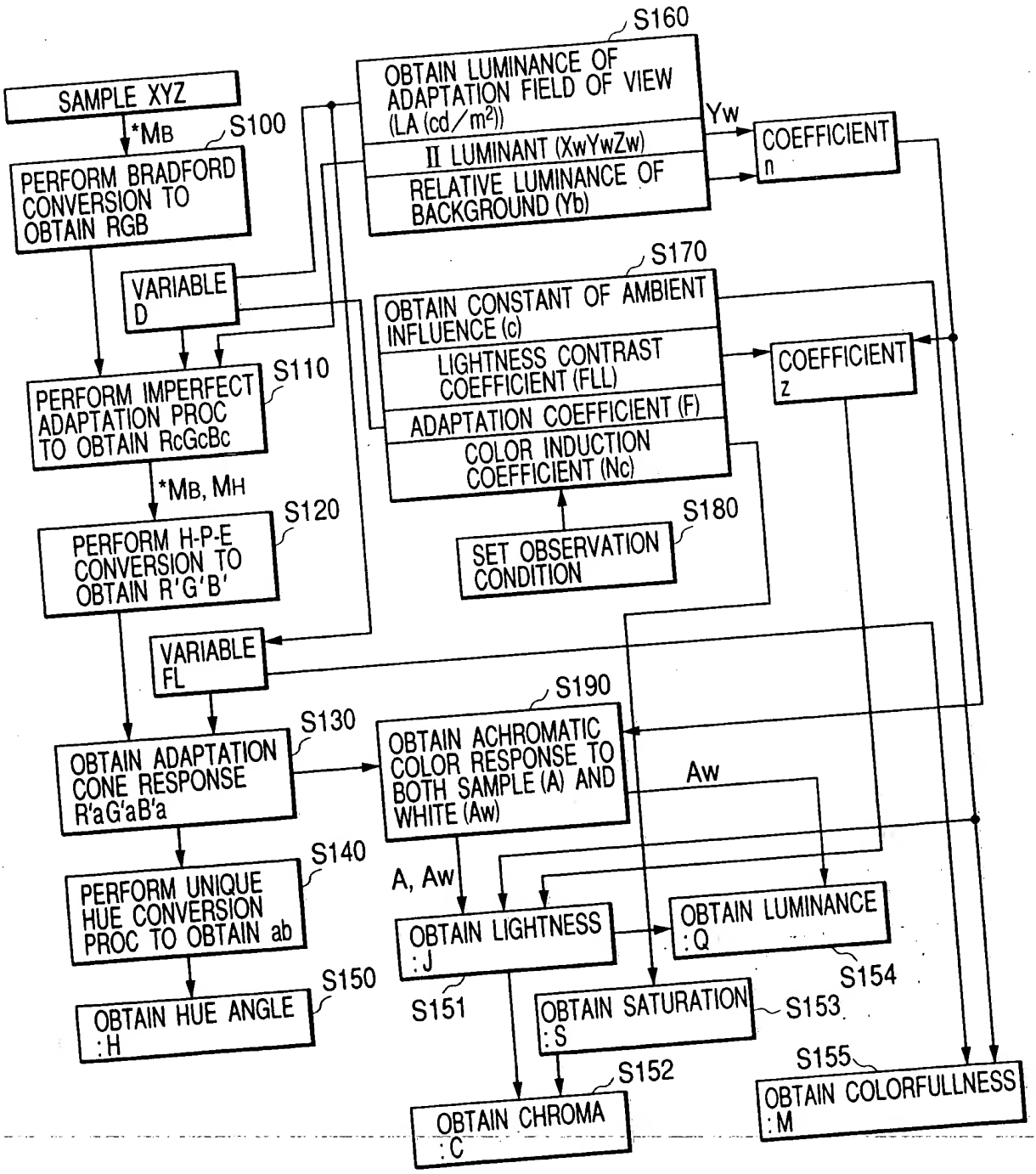

SAMPLE XYZ
*MB
S100
PERFORM BRADFORD CONVERSION TO OBTAIN RGB
VARIABLE D
PERFORM IMPERFECT ADAPTATION PROC TO OBTAIN RcGcBc
S110
*MB, MH
PERFORM H-P-E CONVERSION TO OBTAIN R'G'B'
S120
VARIABLE FL
OBTAIN ADAPTATION CONE RESPONSE R'aG'aB'a
S130
PERFORM UNIQUE HUE CONVERSION PROC TO OBTAIN ab
S140
OBTAIN HUE ANGLE :H
S150
S160
OBTAIN LUMINANCE OF ADAPTATION FIELD OF VIEW (LA (cd/m2))
II LUMINANT (XwYwZw)
RELATIVE LUMINANCE OF BACKGROUND (Yb)
Yw
COEFFICIENT n
S170
OBTAIN CONSTANT OF AMBIENT INFLUENCE (c)
LIGHTNESS CONTRAST COEFFICIENT (FLL)
ADAPTATION COEFFICIENT (F)
COLOR INDUCTION COEFFICIENT (Nc)
COEFFICIENT z
S180
SET OBSERVATION CONDITION
S190
OBTAIN ACHROMATIC COLOR RESPONSE TO BOTH SAMPLE (A) AND WHITE (Aw)
Aw
A, Aw
OBTAIN LIGHTNESS :J
S151
OBTAIN LUMINANCE :Q
S154
OBTAIN SATURATION :S
S153
OBTAIN CHROMA :C
S152
S155
OBTAIN COLORFULLNESS :M

FIG. 14

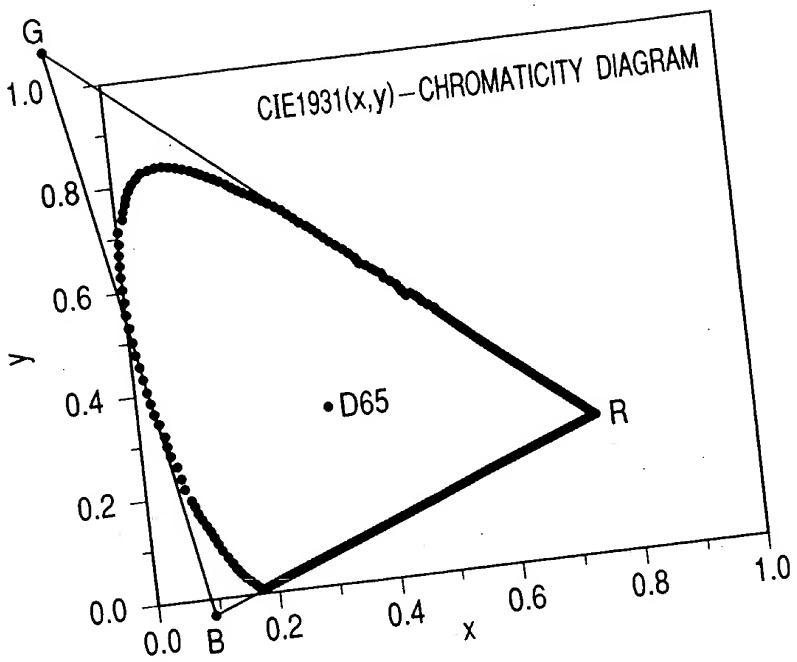

G
1.0
0.8
0.6
0.4
0.2
0.0
y
CIE1931(x,y)−CHROMATICITY DIAGRAM
D65
R
0.0
B
0.2
0.4
0.6
0.8
1.0
x

FIG. 15

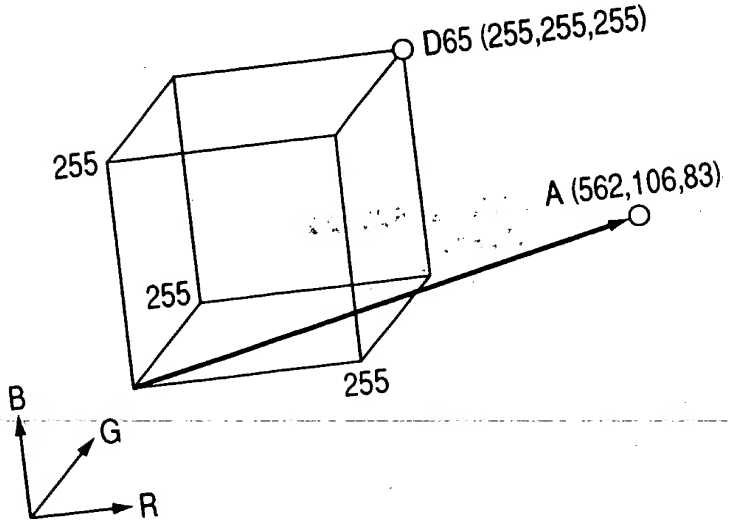

D65 (255,255,255)
255
A (562,106,83)
255
255
B
G
R

FIG. 16

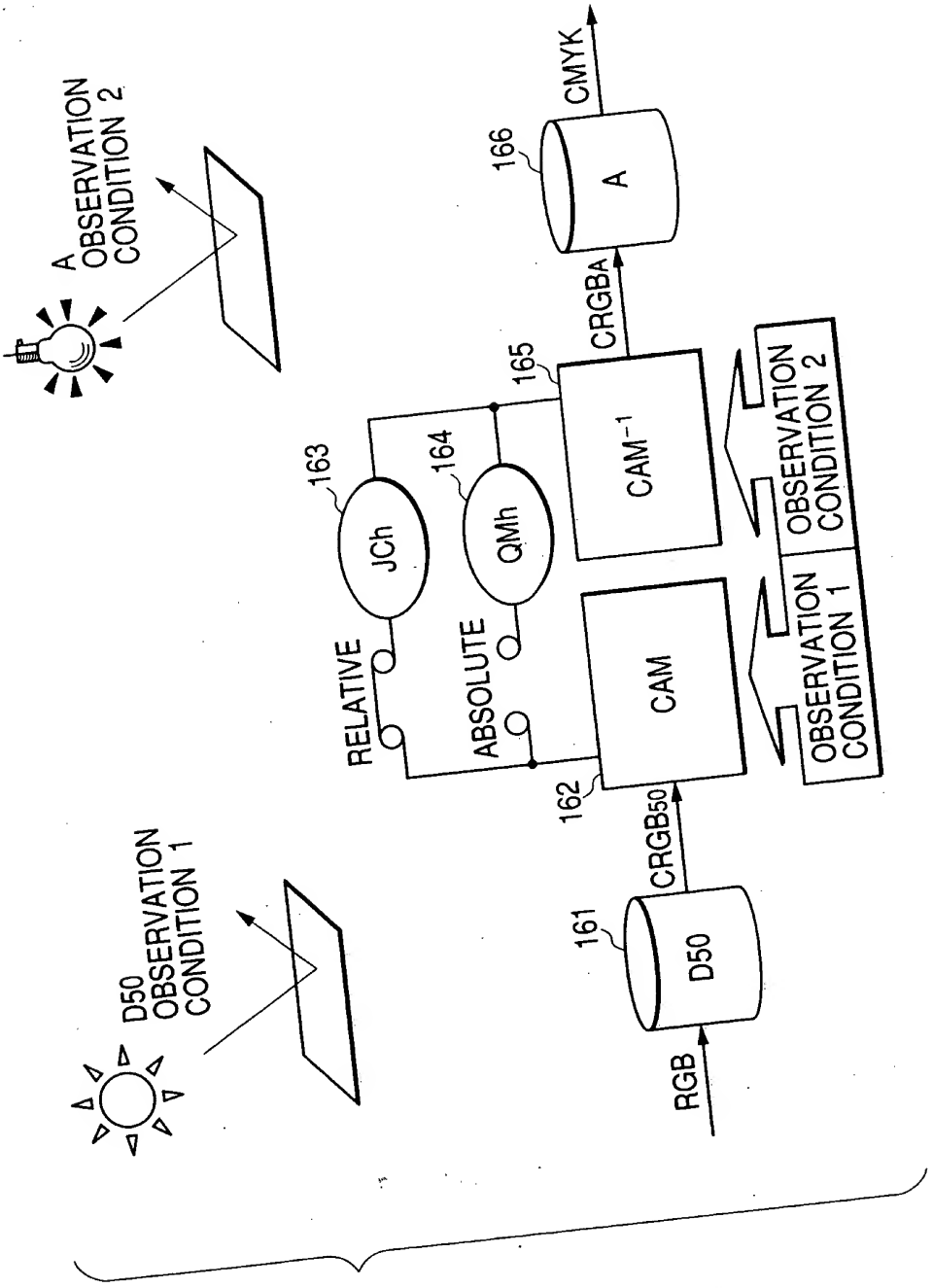
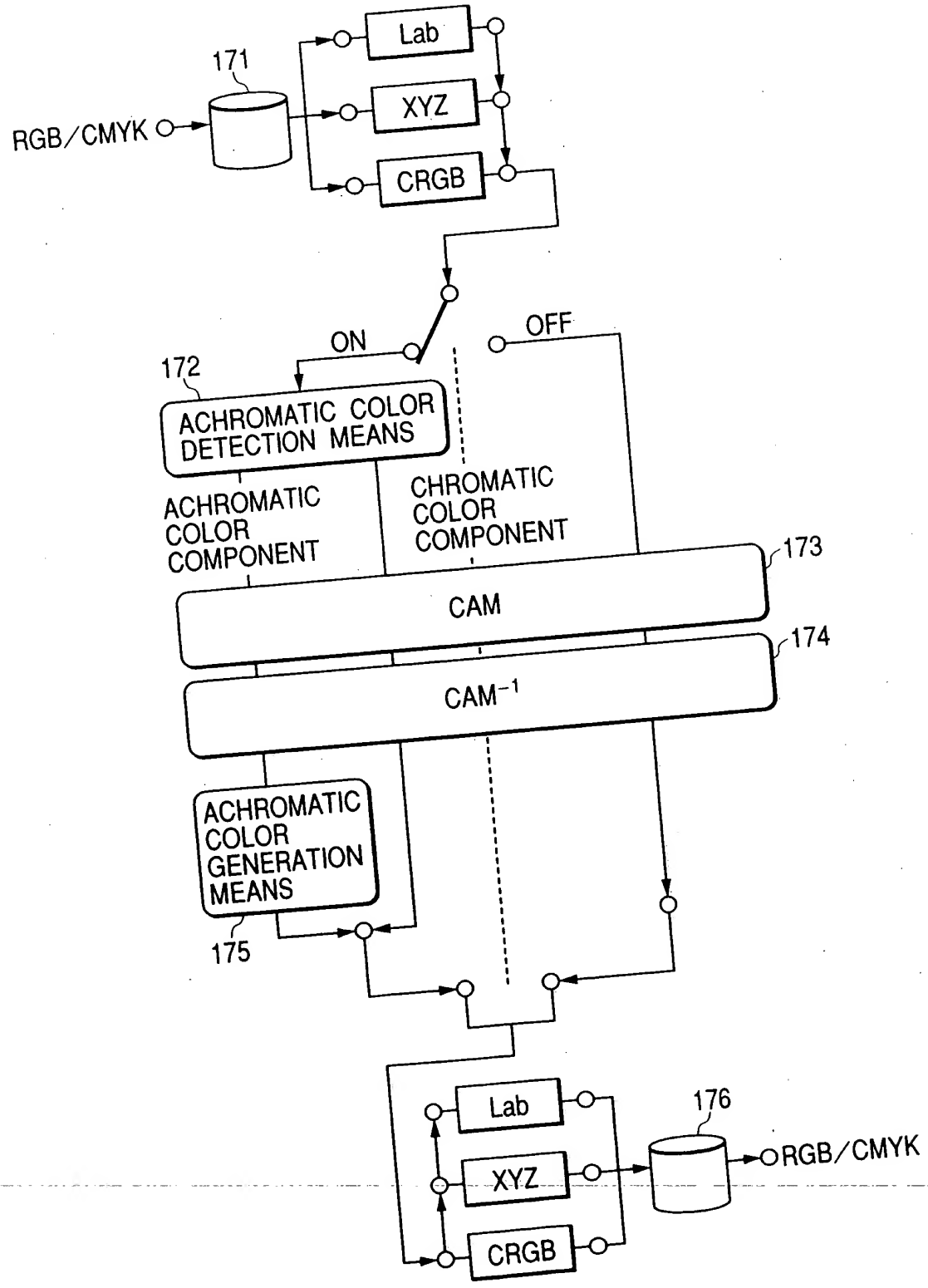

RGB
D50
161
CRGB50
162
CAM
CAM⁻¹
165
CRGBA
166
A
CMYK
163
JCh
164
QMh
RELATIVE
ABSOLUTE
D50 OBSERVATION CONDITION 1
A OBSERVATION CONDITION 2
OBSERVATION CONDITION 1
OBSERVATION CONDITION 2

FIG. 17


RGB/CMYK
171
Lab
XYZ
CRGB
ON
OFF
172
ACHROMATIC COLOR DETECTION MEANS
ACHROMATIC COLOR COMPONENT
CHROMATIC COLOR COMPONENT
173
CAM
174
CAM^{-1}
ACHROMATIC COLOR GENERATION MEANS
175
Lab
XYZ
CRGB
176
RGB/CMYK